The Demographics of the Recipients of the First Economic Impact Payment

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Abstract

Starting in April 2020, the federal government began to distribute Economic Impact Payments (EIPs) in response to the health and economic crisis caused by COVID-19. More than 160 million payments were disbursed. We produce statistics concerning the receipt of EIPs by individuals and households across key demographic subgroups. We find that payments went out particularly quickly to households with children and lower-income households, and the rate of receipt was quite high for individuals over age 60, likely due to a coordinated effort to issue payments automatically to Social Security recipients. We disaggregate statistics by race/ethnicity to document whether racial disparities arose in EIP disbursement. Receipt rates were high overall, with limited differences across racial/ethnic subgroups. We provide a set of detailed counts in tables for use by the public.

* This research was conducted while the authors were employees at the U.S. Department of the Treasury, the Internal Revenue Service, or the U.S. Census Bureau. This paper is a product of the "Improving Access and Utilization of Federal Tax Data to Understand Equity in Federal Distribution of COVID-19-related Economic Impact Payments" subgroup of the Equitable Data Working Group, established by Executive Order 13985. In the process of the subgroup's workings, it became clear that an interagency agreement would be necessary to analyze the distributional impacts of EIP receipt by demographic groups, as information on receipt of EIP was only held by the IRS, and information on race and ethnicity was only held by the Census Bureau. The research conducted in this paper relied on authorities of U.S.C. 26 §6103(n), which allows disclosure of "return and return information…for purposes of tax administration." Treasury, the IRS, and the Census Bureau entered into an agreement whereby the IRS transmitted tax data to the Census Bureau for the purpose of data linkage and analysis described in this paper. The Census Bureau has reviewed this data product for unauthorized disclosure of confidential information and has approved the disclosure avoidance practices applied to this release. DRB Approval Numbers: CBDRB-FY22-CES014-036, CBDRB-FY22-CES014-039, CBDRB-FY23-CES014-011. Any taxpayer data used in this research was kept in a secured Treasury, IRS, or Census Bureau data repository, and the IRS has reviewed all results to ensure that no confidential information is disclosed.

In March 2020, it became clear the COVID-19 pandemic was not just a health crisis but also posed a threat of substantial financial burdens to households in the United States. Initial claims for unemployment insurance increased from roughly 200,000 for the week of March 7 to 2.9 million for the week of March 21 and peaked at more than 6.1 million for the week of April 4 (U.S. Department of Labor, 2020). In April 2020, the unemployment rate increased by 10.3 percentage points to 14.7 percent, the largest monthly increase since the data series began in 1948, and the number of unemployed individuals increased by 15.9 million (Bureau of Labor Statistics, 2020).

The Coronavirus Aid, Relief, and Economic Security Act (CARES Act) was signed into law on March 27, 2020. This legislation contained an income tax credit—the 2020 Recovery Rebate Credit—intended to blunt the economic effects of the pandemic. Crucially, and unlike most tax credits, this credit was advanced to people in 2020 in the form of a stimulus payment, referred to as an "Economic Impact Payment" (EIP) or "First Round EIP" (to distinguish it from additional stimulus payments that were passed later in the pandemic). The law instructed the Secretary of the Treasury to issue these payments "as rapidly as possible" and before 2021.[3]

The Internal Revenue Service (IRS) and the Bureau of the Fiscal Service (BFS) acted quickly. They issued the first direct deposit payments within 2 weeks of the CARES Act being passed and the first paper checks within 4 weeks. Within 9 weeks they had sent 160 million payments to effectively all individuals who the IRS believed at the time to be eligible individuals. For comparison, the last time that stimulus payments were issued in response to a major economic crisis, during the Great Recession in 2008, it took 11 weeks to issue the first direct deposit and 13 weeks to issue the first paper check, with nearly all payments issued within 21 weeks.

Although payments went out rapidly, it is worthwhile to investigate whether there were disparities in the disbursement of EIPs in order to provide policymakers and the public with information that could be used to improve the design of similar policies in the future. This paper comes as an outgrowth of broader work surrounding Executive Order 13985 (EO), issued by President Biden on his first day in office. The EO noted both that measuring equity is important and that equity is currently difficult to measure because many Federal datasets do not contain

[3] An eligible individual who did not receive an EIP in 2020 would have to claim the Recovery Rebate Credit on their 2020 Federal income tax return.

key demographic variables. For example, the IRS does not collect information on racial/ethnic identity.

The EO established an Equitable Data Working Group to gather the data necessary "to measure and advance equity." Through the Equitable Data Working Group, Treasury, the IRS, and the Census Bureau collaborated to conduct statistical analyses of the stimulus payments under the CARES Act, all while protecting the privacy of individuals.[4] This paper is part of that larger project and examines how the disbursement of the First Round EIP varied by race/ethnicity, age, sex, income, and household composition. The statistics presented in this paper are intended to aid in understanding the equity of the implementation of the stimulus payments.

We focus on two measures of First Round EIP disbursement by demographic group: the timing of payments to recipients and an estimate of recipients as a percent of the potentially eligible population. To assess timing, we merge individual-level IRS administrative data on the timing of First Round EIP disbursement with Census Bureau data on demographics. To estimate the potentially eligible population, we use additional administrative records housed at the Census Bureau that provide insight into whether an individual might meet statutory eligibility criteria. This enables us to identify potentially eligible individuals who may not have received a First Round EIP. While the identification of potentially eligible individuals has some shortcomings, we present this estimate because we believe it is useful for identifying disparities across demographic groups.

More than half of individuals who received a First Round EIP did so within the first week that they were distributed, and around 95% received an EIP within the first six weeks. Younger individuals, lower-income tax units, and tax units with children tended to receive their EIP earlier. These groups' higher propensity to be due a tax refund and to receive that refund via direct deposit likely drives this result. The speed at which payments went out varied slightly across racial/ethnic subgroups, but at least 92 percent of recipients in all racial/ethnic subgroups received their payment in the first six weeks of the program.

[4] This paper is a product of the "Improving Access and Utilization of Federal Tax Data to Understand Equity in Federal Distribution of COVID-19-related Economic Impact Payments" subgroup of the Equitable Data Working Group.

We estimate that 228 million individuals were potentially eligible for an EIP, and 92 percent of those individuals—nearly 210 million adults—received an EIP. This is a high rate of receipt when compared to other credits administered through the tax code, and the rate was similarly high for most racial/ethnic subgroups. Hispanic and Some Other Race individuals had the lowest rates of receipt, at 87 percent and 83 percent.

The primary output of this collaboration is the tables in the appendix, which document First Round EIP disbursement for detailed demographic subgroups: for example, female non-Hispanic Asian recipients who are over the age of 60, or low-income, married-filing-jointly (MFJ) tax units in which both partners are Hispanic. We believe that these statistics will enable deep examination. In the main text of this paper, we discuss select statistics that we calculate by aggregating counts in the appendix tables. These aggregated results highlight some findings of import and also illustrate the manner in which the appendix tables can be used.

The remainder of the paper is structured as follows. We begin with a summary of the administration of the First Round EIP. We then describe the data and record linkage process, and the process for constructing detailed demographic tables. Finally, we highlight some of the findings on the timing of receipt and the estimated receipt rate.

First Round Economic Impact Payments

Recovery Rebate Credit. Three refundable tax credits against individual income tax were created by three separate laws passed between March 2020 and March 2021. To provide swift relief from financial burdens imposed by the COVID-19 pandemic, the IRS was directed by all three laws to issue payments for the credits in advance—i.e., before the taxpayer filed a federal income tax return for the corresponding tax year. In March 2020, the CARES Act created the Recovery Rebate Credit for tax year 2020. In December 2020, the Consolidated Appropriations Act of 2021 (CAA) created an "Additional 2020 Recovery Rebate Credit." In March 2021, the American Rescue Plan Act of 2021 (ARP) created a Recovery Rebate Credit for tax year 2021. The IRS calls the advance payments of these three credits Economic Impact Payments (EIPs). This paper focuses on First Round EIPs.

First Round EIPs. The CARES Act directed the IRS to make advance payments of the Recovery Rebate Credit "as rapidly as possible" and before January 1, 2021. First Round EIPs were therefore issued between April 2020 and December 2020. First Round EIPs were calculated

according to the credit size set by the CARES Act and using income information from prior tax years (because income tax returns for 2020 would not start to be filed until 2021). The Recovery Rebate Credit as passed by the CARES Act on March 27, 2020, was for up to $1,200 per eligible individual plus $500 per qualifying child. The credit phased out at a rate of 5 percent of Adjusted Gross Income (AGI) beginning at $75,000 for single filers and $150,000 for married couples filing joint returns.

To be eligible for the individual portion of the First Round EIP, an individual needed a work-eligible Social Security Number (SSN).[5] Each qualifying child also needed a work-eligible SSN. To be eligible as a married couple filing jointly, both spouses needed work-eligible SSNs unless one of the spouses was a member of the U.S. Armed Forces, in which case only one spouse needed a work-eligible SSN.

Filers. In April 2020, the IRS began issuing First Round EIPs automatically to eligible taxpayers who had filed a recent federal income tax return. First Round EIPs were based on a reference tax return, defined to be a tax year 2019 return, or a tax year 2018 return if no tax year 2019 return was available. The payment amount was calculated using the AGI and family status (single or married, number of qualifying children) from the reference return. If the taxpayer had elected on their reference return to receive a refund via direct deposit, the IRS used the same bank account information from the return to issue the First Round EIP electronically. Otherwise, the IRS issued a paper check or debit card to the postal address on the reference return. The IRS continued to receive tax year 2019 returns throughout 2020, and it issued First Round EIPs automatically on the basis of tax year 2019 returns received through November 21, 2020.

For individuals who had filed a recent return but did not elect to receive a refund via direct deposit, the IRS created a new user interface on its website—the "Get My Payment portal"—to gather banking information so those individuals could be sent a direct deposit rather than a paper check.

[5] Per IRS Frequently Asked Questions about the 2020 Recovery Rebate Credit: "A valid SSN for the Recovery Rebate Credit claimed on a 2020 tax return is one that is valid for employment in the United States and is issued by the Social Security Administration (SSA) before the due date of your 2020 tax return (including an extension to October 15, 2021, if you requested it). If the individual was a U.S. citizen when they received the SSN, then it's valid for employment. If "Valid for Work Only with DHS Authorization" is printed on the individual's Social Security card, the individual has the required SSN only as long as the Department of Homeland Security authorization is valid." See answer to Question B5, "IRS revises the 2020 Recovery Rebate Frequently Asked Questions," at https://www.irs.gov/pub/taxpros/fs-2022-26.pdf. Retrieved February 3, 2023.

Non-filers. Many people who were otherwise eligible for First Round EIPs were non-filers—they did not have a return for either tax year 2018 or 2019 processed by the IRS by the time the payment file was being constructed for that particular week. Many non-filers had no filing obligation in those years. For example, a single individual with a work-eligible SSN and annual wage income of $10,000 in 2018 and 2019 would not have been required to file a return in those years but would have been eligible for a First Round EIP.

Some non-filers were issued First Round EIPs based on administrative records other than tax returns. Individuals who received benefits from the Social Security Administration (SSA), the Railroad Retirement Board (RRB), or the Department of Veterans Affairs (VA) and did not file a 2018 or 2019 tax return were issued a payment based on information provided by those agencies about eligibility and banking. Non-filers who did not receive benefits from those agencies were required to take some action in order to obtain an EIP.

Non-filer portal. The IRS created a new user interface on its website to make it easy for eligible non-filers to directly provide the information required by IRS to obtain their EIP. IRS referred to this tool as the "Non-Filers: Enter Payment Info Here tool" or the "Non-Filers tool," but it was more commonly referred to as the "non-filer portal." If an eligible individual filed a tax year 2019 return—even if the individual had no filing obligation or the return was filed after the due date—then the IRS would automatically attempt to issue an EIP, as explained previously. However, the ordinary procedure for filing a federal tax return is somewhat burdensome, even for people with fairly simple tax returns (Benzarti, 2020). To minimize the burden on eligible non-filers of obtaining an EIP, the IRS partnered with the Free File Alliance to develop a simplified mechanism for people without a filing obligation to attest to their eligibility for an EIP. The result of the partnership was a webpage accessible through irs.gov where non-filers interested in claiming their EIP were asked to verify their identity, report their current income and family status, and provide payment information. On the backend, the IRS used this information to create and file a simple 2019 return on behalf of the individual, which allowed the IRS to disburse a First Round EIP. Non-filers used the non-filer portal to file 7 million returns between April 2020 and December 2020.

Outreach. IRS took several steps to raise awareness of the EIP, the Get My Payment portal, and the non-filer portal. IRS developed informational materials in English and Spanish, added telephone operators to answer EIP-related questions, and mailed letters to nearly 9 million

non-filer individuals who may have been eligible but had not yet attempted to claim an EIP as of September 2020.

Payment timing. By the week of April 16, electronic payments had been issued to tax units who had elected to receive a refund via direct deposit on a recent return. By the week of May 21, checks or debit cards had been sent to tax units who had filed a recent return but did not receive a refund via direct deposit and to non-filers who received benefits from the Social Security Administration, the Railroad Retirement Board, or the Department of Veterans Affairs. Within the group that had filed a recent return but did not receive a refund via direct deposit, payments were issued to tax units in order of their adjusted gross income, with payments issued first to tax units with the lowest adjusted gross incomes. Payments were issued on an ongoing basis both before and after the week of May 21 to tax units with newly processed returns and to tax units who used the non-filer portal. Between April 2020 and December 2020, the IRS issued 162 million First Round EIPs for a total of $273 billion in payments.

Data sources and linkage process

To examine the demographics and timing of the disbursement of First Round EIPs, we linked administrative tax data to demographic data at the individual and tax unit levels. This linkage was conducted inside the Census Bureau firewall, leveraging the Census Bureau's data linkage infrastructure. This linkage resulted in several intermediate files, which we then aggregated to arrive at the results we share in this paper. In the next section, we describe the construction of the intermediate files in detail, in order to provide transparency about the choices we made in conducting our analyses. Here, we describe the underlying microdata files used to construct the intermediate files.

The key input file for this analysis is a file of First Round EIP recipients, provided by the IRS to the Census Bureau as authorized under section 6103(n) of Title 26 of the U.S. Code. The file includes information on EIP payment amount and timing. It also contains personal information that permitted the Census Bureau to run the Person Identification Validation System (PVS) on primary and secondary filers in the receiving tax unit to assign Protected Identification Keys (PIKs). These PIKs are unique identifiers that facilitate linking individuals to other administrative datasets (for more information on PVS, see Wagner and Layne, 2014). PVS could

not assign a PIK to approximately 2.7 percent of records in the EIP file—an issue that we will discuss further in the next section.

We attach demographic information to individuals by linking to two additional datasets held at the Census Bureau: (1) the Census Best Race and Ethnicity file, which is a composite file combining race and ethnicity information from a number of underlying sources including the Decennial Census (see Ennis et al., 2018, for details on this file); and (2) the Census Numident, which is the Census Bureau's master file, containing basic demographic information for all individuals who have ever received an SSN.

Part of our analysis includes identifying individuals who were potentially eligible for the First Round EIP but may not have received it. To do this, we require information on individual and tax unit attributes—such as income—which can proxy for the eligibility criteria used by the IRS. The data sources we used for this part of our analysis were already held at the Census Bureau and include IRS Form 1040 data, IRS Form W-2 data, the SSA Master Beneficiary Record, the SSA Supplemental Security Record, the SSA Payment History Update System, and the Housing and Urban Development Public and Indian Housing Information Center and Tenant Rental Assistance Certification Systems Longitudinal File (HUD PIC-TRACS).

The IRS 1040 data is an extract of information from the universe of tax year 2018 and tax year 2019 individual income tax returns—i.e., Form 1040. We use information from these data on filing status (single, married filing jointly, etc.), adjusted gross income, and identification numbers for the primary filer, the secondary filer, and up to four dependents. Similarly, the IRS Form W-2 data is an extract of information from the universe of tax year 2018 and tax year 2019 wage and tax statement information returns—i.e., Form W-2. We use the information on wages, tips, and other compensation contained in these data.

The SSA data contain information on who received benefits from the Old-Age, Survivors, and Disability Insurance (OASDI) and Supplemental Security Income (SSI) programs, which we use to estimate potential eligibility. We use the HUD administrative records on housing assistance as an alternative source of income information, which allows us to identify an additional set of non-filer individuals who may have met income thresholds.

Construction of intermediate files

All of the statistics released with this paper are constructed from three intermediate files: a potentially eligible population file, an individual file, and a tax unit file. The latter two files build off of the potentially eligible population file. We briefly describe the construction of these files next.

Potentially eligible population file. We can observe which individuals received a First Round EIP using the EIP file, but we cannot observe which individuals might have been eligible for a First Round EIP but did not receive it. Although the IRS is the arbiter of eligibility, we can make an inference about which EIP nonrecipients may have been eligible by comparing the statutory eligibility criteria to information from various linked data sources. Therefore, the potentially eligible population we construct is an estimate of the size of the actual eligible population.

We define an individual as potentially eligible if the individual was a primary or secondary EIP recipient or meets all the following criteria:

1. The individual has a record in the Census Numident (i.e., they have a Social Security number)[6].
2. The individual attained age 17 by December 31, 2019, and was living on January 1, 2020.
3. The individual was not claimed as a dependent on a tax year 2019 Form 1040; did not declare that they could be claimed as a dependent if they filed a Form 1040 for tax year 2019; and did not declare that they could be claimed as a dependent for tax year 2018 if they did not file for tax year 2019 but did file for tax year 2018.
4. The individual (a) was a primary or secondary filer on a tax year 2018 or 2019 Form 1040, (b) had income on a tax year 2018 or 2019 Form W-2, (c) had income reported to the Department of Housing and Urban Development (HUD) for 2018 or 2019, or (d) received Social Security benefits in 2020.
5. The individual did not have income in excess of the First Round EIP phaseout range, where income was measured as (a) AGI on a Form 1040 (b) the sum of wages reported on Forms W-2, or (c) income as reported to HUD.

[6] We were not able to exclude non-work eligible SSNs. However, since the other filters implicitly require some attachment to the formal economy, this should have only limited impact

The potentially eligible population thus includes two types of individuals: eligible filers as determined by Form 1040 and individuals whose eligibility is categorized based on receipt of benefits from an SSA program or income reported on a Form W-2 or to HUD. We also note that, in contrast to the EIP recipient file, all individuals in the potentially eligible population have a PIK. [7]

Individual file. Our individual file includes every adult in the Census Numident who was at least 17 years of age as of December 31, 2019, alive as of January 1, 2020, and who received a First Round EIP or is part of our potentially eligible population.

Because not all records in the EIP file received a PIK, it is important to note that the individual file contains three types of records, which correspond to the extent of their linkage across key files:

1. Individuals in the IRS EIP file who received EIP as primary/secondary filers, and for whom Census PVS could assign a PIK;
2. Individuals in the IRS EIP file who received EIP as primary/secondary filers, but for whom Census PVS could not assign a PIK; and
3. Individuals in the potentially eligible population who do not appear in the IRS EIP file, all of whom have a PIK.

The second category of individuals—those without a PIK—make up 2.7 percent of records in the EIP file and create potential issues for the analysis presented here. In particular, we define likely eligible nonrecipients as any individuals in our potentially eligible population who cannot be linked to an EIP payment record. Because not all recipients could be assigned a PIK on the EIP file, it is thus possible that the count of potentially eligible nonrecipients is inflated, as some individuals may be double counted, appearing both as an EIP recipient not assigned a PIK (category 2) and as a potentially eligible nonrecipient with a PIK (category 3). The extent of this overcounting is bounded above by the PIK non-assignment rate (2.7 percent).

In addition, records without PIKs cannot be linked to the Census Best Race/Ethnicity file, which we use to assign race/ethnicity to all individuals. As a result, we must classify these individuals as having an "Unknown" race/ethnicity. The Unknown race/ethnicity category makes

[7] It is also possible for us to misclassify individuals as eligible in rarer cases: for instance, if a non-filer child could have been claimed by a non-filer parent but otherwise met the criteria, or if an individual filed jointly with a spouse whose SSN was not valid for employment.

up 7.3 percent of individuals in the EIP file, as there is also a small percentage of individuals with PIKs for whom race is unidentified in the Census Best Race/Ethnicity file.[8] The presence of the Unknown race/ethnicity category means that all counts pertaining to specific racial/ethnic groups should be understood to potentially undercount the true number of EIP eligible and/or recipient individuals in that population. Notably, since the potentially double-counted records are not assigned race/ethnicity in at least one record, the only racial/ethnic subgroup that potentially suffers from double counting in the eligibility counts is the Unknown subgroup.

The two other key variables for the individual file—age and sex—are reported in both the IRS EIP file and the Census Numident. Thus, we have extremely high coverage of these two demographic variables, even for individuals in the EIP file who are not assigned a PIK.

Tax unit file. Our tax unit file includes all tax units that receive a First Round EIP. We supplement this set of tax units with any individuals who are in the potentially eligible population but who do not appear in the recipient file. For this second set of individuals, we use their 2019 or 2018 IRS 1040 filing information to assign their tax unit characteristics, taking into account the tax units that we observe in the EIP recipient file.[9] We limit the tax unit file to tax units where either (1) the primary or secondary filer is at least 17 years of age as of December 31, 2019 and alive on January 1, 2020 or (2) the tax unit contains children.

As with the individual file, the tax unit file contains three types of records, corresponding to the extent of their linkage across key files:

1. Tax units in the IRS EIP file who received a First Round EIP, and for whom Census PVS could assign a PIK for the primary filer and for the secondary filer, if married filing jointly;
2. Tax units in the IRS EIP file who received a First Round EIP, but for whom Census PVS could not assign a PIK for either the primary or secondary filer, or both; and
3. Tax units constructed of individuals in the potentially eligible population who do not appear in the IRS EIP file, all of whom have a PIK.

Tax units in the third category are considered potentially eligible nonrecipient units. However, it is possible that if the individuals in the second category of tax units had been successfully

[8] In general, individuals whose race/ethnicity is unidentified in the Census Best Race/Ethnicity file have no race/ethnicity information in any of the underlying source files.
[9] For example, if two eligible individuals filed a joint return in 2018 and only one appears in the EIP recipient file, the remaining non-recipient is categorized as a non-MFJ tax unit.

assigned PIKs, they would have been linked to individuals in the third category. Thus, as with the individual file, counts of potentially eligible nonrecipients from the tax unit file should be considered an upper-bound on the true counts.

The main variables of interest for the tax unit file are filing status, AGI, presence of children, and tax unit race/ethnicity. Filing status, AGI, and presence of children come from the EIP file first, if available, or the IRS Form 1040 data if the tax unit filed a 2019 or 2018 return. All remaining units—those that neither received a First Round EIP nor filed a 2019 or 2018 Form 1040—are classified as non-filers and assumed to not be MFJ and to not contain children. Race and ethnicity for both the primary and secondary taxpayer come from the Census Best Race/Ethnicity file and thus, have similar issues of missingness as discussed with the individual file.

Results

The foremost purpose of this paper is the release of the statistics in the appendix tables, which we briefly describe here. These tables are difficult to parse quickly, since they are each disaggregated by multiple demographic characteristics. Thus, in the discussions later in this section, we highlight select statistics derived from these tables. We first discuss certain differences in First Round EIP receipt that were predictable based on institutional knowledge about the program roll out. Then, we turn to a discussion of racial/ethnic differences in EIP receipt. This latter analysis is central to the aim of our work under the EO. We believe these discussions also offer an illustration of how the reader might use the appendix tables to derive the statistics of most use to them.

The Appendix Tables

The three appendix tables report similar statistics concerning the receipt of the First Round EIP. The tables differ by the demographic characteristics included. They also differ in their unit of analysis: Table A1 reports counts of individuals, while Tables A2 and A3 report counts of tax units.

Specifically, each table reports the count of individuals (Table A1) or tax units (Tables A2 and A3) who

- received the First Round EIP at any time,[10]
- received the First Round EIP the week of April 16 or earlier,
- received the First Round EIP between the week of April 23 and the week of May 21, and
- received the First Round EIP the week of May 28 or later.

The tables also report the estimate of the total number of potentially eligible recipients and nonrecipients based on the analysis described in the prior section.

The reported time periods were chosen to coincide with recipient characteristics and methods of delivery. The first time period was when most payments were delivered electronically to individuals who had received a refund on a recent return and elected to receive that refund via direct deposit. The second time period corresponds to when most payments were delivered via paper check or debit card. Recipients during this time period included taxpayers who had filed a recent return but did not receive a refund via direct deposit and non-filers who received benefits from the Social Security Administration, the Railroad Retirement Board, or the Department of Veterans Affairs. Payments made during the final time period were mostly sent to individuals whose recent return was newly processed and individuals who used the non-filer portal.

Table A1 counts individuals in demographic subgroups defined by race/ethnicity, age, and sex. Race/ethnicity is coded using nine mutually exclusive and collectively exhaustive categories:

1. Hispanic, of any race
2. Non-Hispanic American Indian or Alaska Native (AIAN) alone
3. Non-Hispanic Asian alone
4. Non-Hispanic Black alone
5. Non-Hispanic Multiracial
6. Non-Hispanic Native Hawaiian or Other Pacific Islander (NHPI) alone
7. Non-Hispanic Some Other Race (SOR) alone
8. Non-Hispanic White alone
9. Unknown

[10] Note: our count of recipients will not necessarily add up to totals from previous IRS releases, since the linked IRS data used to generate our results was pulled from underlying IRS databases at a later date.

For brevity, we will sometimes drop the "non-Hispanic" and "alone" qualifiers; thus, for example, an "Asian" individual is one who is non-Hispanic Asian alone.

Age is coded using four categories: under age 26, 26-29 years old, 30-60 years old, and more than 60 years old. Many individuals under the age of 26 can be claimed as dependents. Since potentially erroneous misclassification is higher among individuals under the age of 26, these age categories were chosen to permit separate analysis of this subgroup. Sex is coded as female or male and generally corresponds to the sex on an individual's Social Security record.

Table A2 counts tax units in demographic subgroups defined by race/ethnicity, filing status, and adjusted gross income. Tax units that are not married filing jointly contain one individual filer—the primary filer. Thus, the race/ethnicity of non-MFJ tax units is coded using the same nine categories as for individuals in Table A1. The race/ethnicity of tax units that are married filing jointly is constructed from the race/ethnicity of the joint filers—i.e., the primary and secondary filer. We use 15 mutually exclusive and collectively exhaustive race/ethnicity categories:

1. Both Asian (or one Asian, one Unknown)
2. Both Black (or one Black, one Unknown)
3. Both Hispanic (or one Hispanic, one Unknown)
4. Both White (or one White, one Unknown)
5. Both Unknown
6. Asian & Black
7. Asian & Hispanic
8. Asian & White
9. Black & Hispanic
10. Black & White
11. Hispanic & White
12. Either NHPI
13. Either SOR (unless either NHPI)
14. Either AIAN (unless either NHPI or SOR)
15. Either Multiracial (unless either NHPI, SOR, or AIAN)

Filing status is coded into two categories: married filing jointly, and not married filing jointly. Adjusted gross income is coded into four categories: less than $30,000; at least $30,000

and less than $70,000; at least $70,000; and non-filer.[11] The cutoffs of $30,000 and $70,000 were chosen to roughly split filing tax units into thirds.

Table A3 counts tax units in demographic subgroups defined by race/ethnicity, filing status, and the presence of children. Race/ethnicity and filing status are coded the same as in Table A2. Note that the race and ethnicity of the tax unit is defined based on the race and ethnicity of the primary and secondary filers, not the race and ethnicity of the children. Presence of children is coded as "yes" if any dependent children are present in the IRS extracts and "no" otherwise.

Discussion: Receipt by age, AGI, and presence of children

We first discuss patterns in receipt based on age, income, and presence of children that likely arise due to the structure of the program. These provide useful context for interpreting differences in receipt by race and ethnicity, discussed next.

As shown in Table 1, nearly 210 million individuals and 161 million tax units received the First Round EIP. More than half received payment in the first week of payments, and 95 percent had been paid by the sixth week of payments (the week of May 21).

Practical elements of the roll out of EIP payments resulted in differences in the types of tax units that received a First Round EIP earlier in the process versus later. We included characteristics in our analysis that would permit inspection of some of these structural factors. In Table 1, we aggregate the counts in the appendix tables to derive statistics summarizing EIP receipt by age, sex, AGI, and presence of children. We describe differences in receipt across these groups and then contextualize them.

The percentage of individuals and tax units receiving payment in the first week varied substantially by certain characteristics. Individuals over the age of 60 were much less likely to receive payments in the first week (38 percent compared to 62 percent of those ages 26-60, and 71 percent of those under age 26). Tax units with children were much more likely than those without children to receive payment in the first week (77 percent compared to 48 percent). The

[11] EIP recipients are categorized as non-filers if AGI is missing from the IRS extracts or AGI is listed as exactly one dollar, a sign that the individual used the non-filer portal. Tax units appearing in the EIP file or in the 2018 or 2019 IRS 1040 data are assigned a filing status based on their filing information in these datasets. Any remaining tax units are categorized as non-MFJ. Note that these tax units may contain married individuals, but we do not observe their marital status. Non-filers can be categorized as married filing jointly only if they used the non-filer portal.

	Recipients	Received first week	Received first six weeks	Potentially eligible	Recipients as a percentage of potentially eligible
Individuals	209,469,000	55%	95%	227,822,000	92%
Age <26	15,514,400	71%	94%	17,965,000	86%
Ages 26-60	128,021,500	62%	95%	139,380,500	92%
Age >60	65,933,100	38%	97%	70,476,500	94%
Female	109,288,300	57%	96%	117,416,000	93%
Male	100,180,700	54%	95%	110,406,000	91%
Tax units	160,982,550	54%	95%		
AGI <$30,000	45,700,050	67%	97%		
AGI $30,000-69,999	52,689,200	69%	96%		
AGI >=$70,000	34,608,450	57%	98%		
Non-filer	27,984,850	2%	87%		
With children	35,658,050	77%	98%		
Without children	125,324,200	48%	94%		

Source: IRS EIP Receipt Extract, 2018-2019 IRS 1040s, Census Best Race File, Census Numident, HUD Public and Indian Housing Center and Tenant Rental Assistance Certification System data, IRS W-2s, SSA Payment History Update System and Supplemental Security Record data.
Note: the statistics on individuals are derived from appendix table 1; the statistics on tax units by AGI are derived from appendix table 2; and the statistics on tax units by presence of children are derived from appendix table 3. Census DRB Approval numbers CBDRB-FY22-CES014-036, CBDRB-FY22-CES014-039, CBDRB-FY23-CES014-011.

Table 1. Receipt of the First Round Economic Impact Payment by age, sex, adjusted gross income, and presence of children.

first week payments also somewhat favored lower-income tax units (67 percent and 69 percent of low- and middle-AGI tax units received payment in the first week, compared to 57 percent of high-AGI tax units), and hardly any tax units who had not filed taxes for 2018 or 2019 received a payment that first week.

These differences make sense given that the IRS was able to automatically issue payments most quickly for individuals and tax units for whom it had direct deposit information. More specifically, these were individuals and tax units who had filed taxes for 2018 or 2019 and received a refund via direct deposit. Receiving a refund is more likely for lower-income tax filers and those with children[12], while using direct deposit is more common among younger filers (who

[12] Tax units with children are also more likely to have negative tax liability because of their eligibility for the Earned Income Tax Credit and Child Tax Credit, and therefore, we expect are more likely to receive a refund.

also tend to have lower income than prime-working-age filers). For eligible recipients who had not filed taxes for 2018 or 2019, receiving a payment in the first week was virtually impossible: most had to wait to use the non-filer portal.

These differences largely disappeared by the sixth week of the program. Notably, recipients over the age of 60 had a higher proportion of payments received in the first six weeks than their younger counterparts, reversing the patterns of the first week. This is likely because the IRS was able to determine eligibility and issue First Round EIPs to Social Security recipients—who are typically older—even if they had not filed taxes. The IRS and SSA coordinated to get payments out to Social Security recipients starting the week of April 23 and soon after.

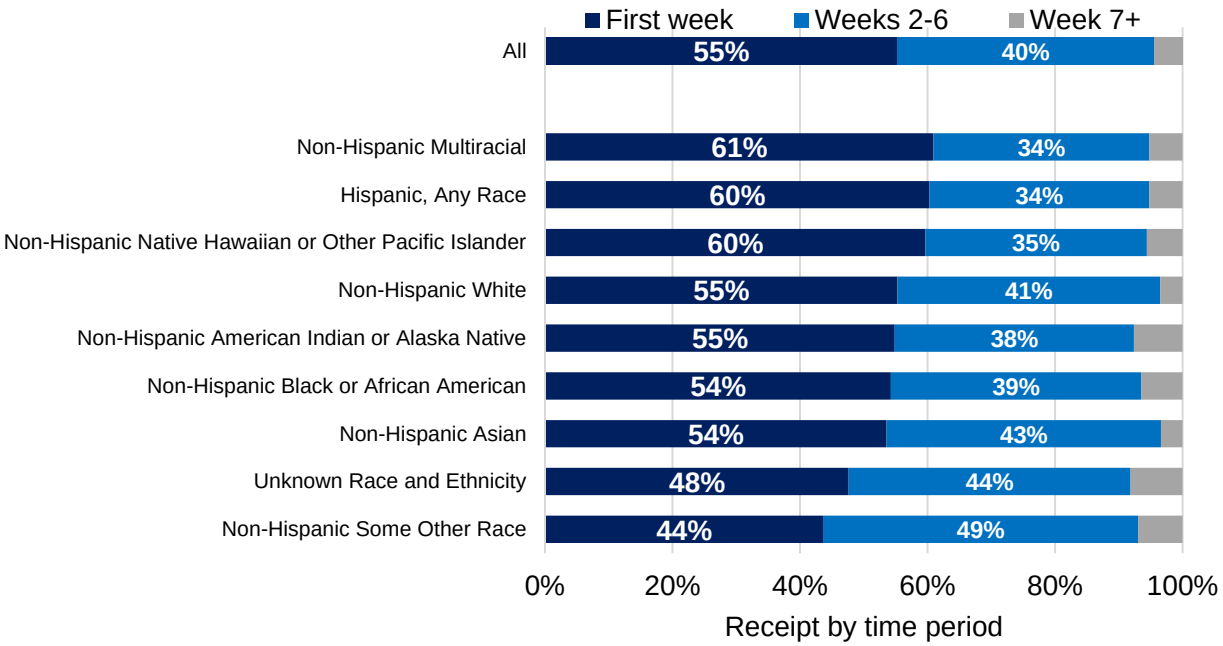
Outreach initiatives like the automatic payments to Social Security recipients likely helped the First Round EIP to achieve very high take-up. We estimate that 92 percent of potentially eligible individuals received an EIP. This estimate should be considered a lower bound of the true receipt rate since our estimate of the potentially eligible population may be overstated. Notably, this receipt rate is a much larger percentage than the 78 percent of potentially eligible individuals who take up the Earned Income Tax Credit (Jones, 2014). The role of the Social Security initiative, in particular, is supported by the fact that individuals over the age of 60 had a higher rate of receipt as a percentage of the potentially eligible population (94 percent) versus younger age groups.

Discussion: Racial/ethnic differences in receipt

Importantly, our analysis enables study of EIP receipt by race/ethnicity. Figure 1 shows the timing of First Round EIP receipt overall and by racial/ethnic subgroups. Approximately 60 percent of multiracial, Hispanic, or NHPI recipients received a payment in the first week, in contrast to approximately 55 percent of White, AIAN, Black, or Asian recipients. Every racial/ethnic subgroup had over 90 percent of payments received in the first six weeks, but White and Asian recipients were the most likely to get their payments in those first six weeks.

A further analysis of Appendix Table A3 reveals that the percentage of married filing jointly tax units with children who received payment in the first week ranged from 67 to 75 percent across racial/ethnic subgroups. Among non-married filing jointly tax units with children, the percentage receiving payment in the first week ranged from 78 to 82 percent. This indicates

that most families—and single parent families, in particular—received assistance rapidly under the program, and this was true regardless of parents' race/ethnicity.



Source: IRS EIP Receipt Extract, 2018-2019 IRS 1040s, Census Best Race File, Census Numident, HUD Public and Indian Housing Center and Tenant Rental Assistance Certification System data, IRS W-2s, SSA Payment History Update System and Supplemental Security Record data.
Note: Statistics are derived from appendix table 1. Census DRB Approval numbers CBDRB-FY22-CES014-036, CBDRB-FY22-CES014-039,

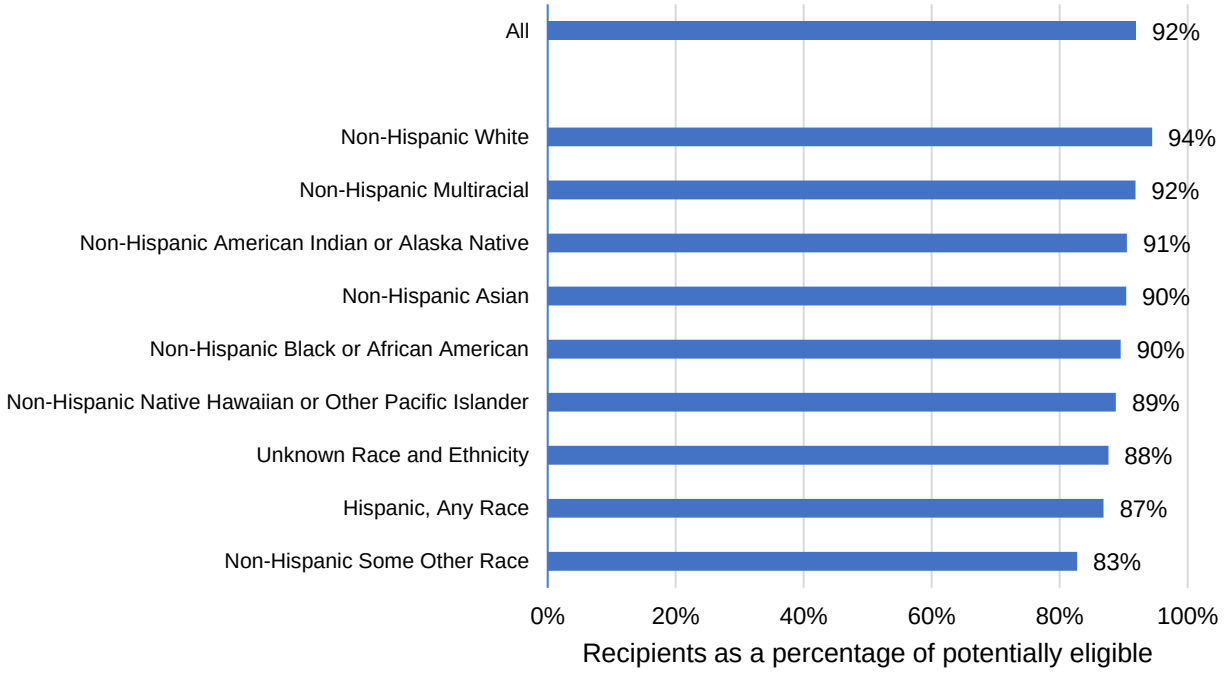
Figure 1: Timing of receipt by race/ethnicity.

Figure 2 summarizes the rate of receipt as a percent of the potentially eligible population by race/ethnicity. Rates largely hovered around 90 percent, though White individuals were most likely to receive an EIP if deemed potentially eligible at 94 percent. Hispanic and Some Other Race individuals had the lowest rates at 87 percent and 83 percent, respectively.

Figure 3 highlights the sort of nuanced analysis enabled by the disaggregated data in the appendix tables. We contrast the rate of receipt as a percentage of the potentially eligible population by age and race/ethnicity for individuals in the four largest racial/ethnic subgroups. Note that the vertical axis is truncated to show more detail. As with the overall population shown in Table 1, Black and White individuals were more likely to receive an EIP if over age 60. This is not the case, however, for Asian and Hispanic individuals, who see the highest rate of EIP receipt among 26- to 60-year-olds. This may reflect that the Hispanic and Asian subgroups

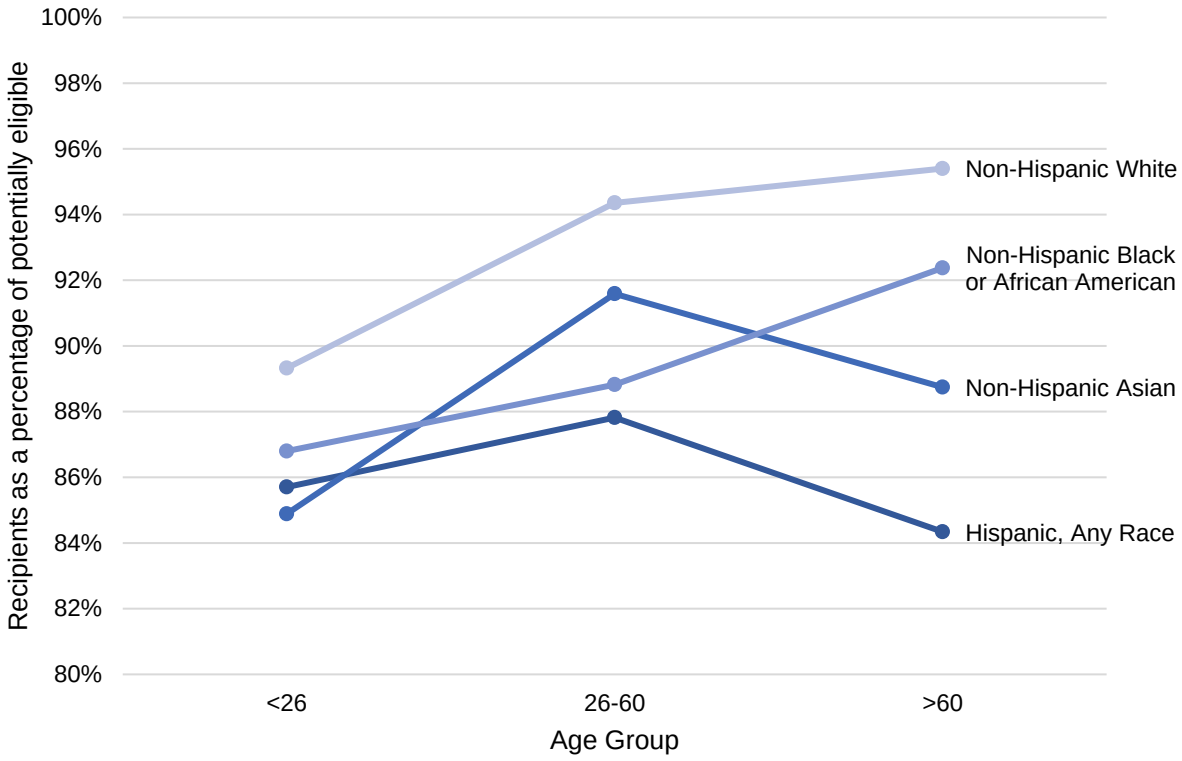
include more recent immigrants who are less likely to receive Social Security, and thus were less likely to benefit from the coordination between IRS and SSA.[13]

[13] SSA estimates that in 2020, of the approximately 2.4 million individuals aged 60 or older expected to never receive Social Security benefits, 49 percent have a race or ethnicity other than White or Black and 46 percent are immigrants who arrived after age 49 and do not have sufficient work history to qualify for Social Security. In comparison, among individuals aged 60 or older who are either current or expected future beneficiaries, only 15 percent have a race or ethnicity other than White or Black (Social Security Administration, 2021).



Source: IRS EIP Receipt Extract, 2018-2019 IRS 1040s, Census Best Race File, Census Numident, HUD Public and Indian Housing Center and Tenant Rental Assistance Certification System data, IRS W-2s, SSA Payment History Update System and Supplemental Security Record data.
Note: Statistics are derived from appendix table 1. Census DRB Approval numbers CBDRB-FY22-CES014-036, CBDRB-FY22-CES014-039,

Figure 2: Recipients as a percent of the potentially eligible population by race/ethnicity.



Source: IRS EIP Receipt Extract, 2018-2019 IRS 1040s, Census Best Race File, Census Numident, HUD Public and Indian Housing Center and Tenant Rental Assistance Certification System data, IRS W-2s, SSA Payment History Update System and Supplemental Security Record data.
Note: Statistics are derived from appendix table 1. Census DRB Approval numbers CBDRB-FY22-CES014-036, CBDRB-FY22-CES014-039, CBDRB-FY23-CES014-011.

Figure 3: Recipients as a percent of the potentially eligible population by select race/ethnicity and age.

Conclusion

This paper has documented the demographics of receipt of the First Round Economic Impact Payments authorized under the CARES Act. These payments were disbursed quickly, with 95 percent of recipients receiving payments in the first six weeks of the program. Lower income individuals and families with children received payments earlier than higher income or families without children, suggesting that IRS operational decisions on payment prioritization had their desired effect.

Quick receipt of payment was shared across racial/ethnic subgroups, both overall and for tax units with children. The rate of receipt was near 90 percent for most racial/ethnic subgroups, but it was highest for White individuals and lowest for Hispanic and Some Other Race individuals.

This research project has provided a unique test case for the ability of federal agencies to rapidly conduct joint research on the equity of the administration of programs affecting the American public. The detailed tabulations provided in the appendix will allow for further analysis and provide important and timely statistics to the American people. This work shows that it is feasible to conduct joint research involving the linking of confidential data, while abiding by all necessary privacy protections, data use agreements, and access controls.

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